TITLE 326 AIR POLLUTION CONTROL BOARD

FIRST NOTICE OF COMMENT PERIOD
LSA Document #11-251

DEVELOPMENT OF AMENDMENTS TO RULES CONCERNING NEW SOURCE REVIEW PROVISIONS FOR PARTICULATE MATTER LESS THAN 2.5 MICRONS ($PM_{2.5}$)

PURPOSE OF NOTICE

The Indiana Department of Environmental Management (IDEM) is soliciting public comment on amendments to rules at 326 IAC 2 concerning new source review (NSR) provisions for particulate matter less than 2.5 microns ($PM_{2.5}$), as well as amendments to definitions of terms in 326 IAC 2 to defer from greenhouse gas permitting requirements carbon dioxide (CO_2) emissions from bioenergy and other biogenic sources. IDEM seeks comment on the affected citation listed and any other provisions of Title 326 that may be affected by this rulemaking.

CITATIONS AFFECTED: 326 IAC 2.

AUTHORITY: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11.

SUBJECT MATTER AND BASIC PURPOSE OF RULEMAKING

Basic Purpose and Background

Airborne particulate matter (PM) with a nominal aerodynamic diameter of 2.5 micrometers or less are considered to be "fine particles" and are also known as $PM_{2.5}$. "Primary" particles are emitted directly into the air as a solid or liquid. "Secondary" particles form in the atmosphere as a result of various chemical reactions. Other air pollutants, known as precursors, that also contribute to $PM_{2.5}$ concentrations include sulfur dioxide (SO_2), nitrogen oxides (NO_x), volatile organic compounds (VOC), and ammonia (NH_3). These gas-phase precursors undergo chemical reactions in the atmosphere to form secondary PM.

There are negative health effects associated with exposure to $PM_{2.5}$. Studies have shown a significant correlation between elevated $PM_{2.5}$ levels and premature mortality. Other health effects from $PM_{2.5}$ exposure include aggravation of respiratory and cardiovascular disease, lung disease, decreased lung function, asthma attacks, and certain cardiovascular problems.

The Clean Air Act (CAA) requires the United States Environmental Protection Agency (U.S. EPA) to set National Ambient Air Quality Standards (NAAQS) for "criteria" pollutants considered harmful to public health and the environment. PM is a criteria pollutant. On July 18, 1997, U.S. EPA revised the NAAQS for PM to add new standards for fine particles, using $PM_{2.5}$ as the indicator. On October 16, 2006, U.S. EPA revised the NAAQS for $PM_{2.5}$. The 2006 revisions tightened the 24-hour $PM_{2.5}$ standard to 35 $\mu g/m^3$, and retained the existing annual $PM_{2.5}$ NAAQS of 15$\mu g/m^3$.

On May 16, 2008, U.S. EPA published the final rule: "Implementation of the New Source Review (NSR) Program for Particulate Matter Less than 2.5 Micrometers" ($PM_{2.5}$ NSR Implementation Rule) (73 FR 28321). U.S. EPA's NSR program is a preconstruction permitting program that applies when a source is constructed or modified. NSR regulations require both major and minor state NSR programs to address any pollutant, and the precursors to the formation of that pollutant, for which there is a NAAQS. The $PM_{2.5}$ NSR Implementation Rule finalized the major NSR program provisions for $PM_{2.5}$ including the major source threshold, significant emissions rate (SER), offset ratios for $PM_{2.5}$, interpollutant trading for offsets, and the applicability of NSR to $PM_{2.5}$ precursors.

On October 20, 2010, U.S. EPA published the final rule: "Prevention of Significant Deterioration (PSD) for Particulate Matter Less Than 2.5 Micrometers-Increments, Significant Impact Levels (SILs) and Significant Monitoring Concentration (SMC)" ($PM_{2.5}$ PSD Increments, SILs, and SMC Rule) (75 FR 64864). This rulemaking supplements the May 16, 2008 $PM_{2.5}$ NSR Implementation Rule. The rule established increments, SILs, and an SMC for $PM_{2.5}$ to facilitate ambient air quality monitoring and modeling under the PSD regulations for areas designated attainment or unclassifiable for $PM_{2.5}$.

These two rules, the 2008 $PM_{2.5}$ NSR Implementation Rule and the 2010 $PM_{2.5}$ PSD Increments, SILs, and SMC Rule, amend the federal NSR regulations to establish the minimum elements for state permitting programs implementing NSR for the 2006 revised $PM_{2.5}$ NAAQS. In this rulemaking, IDEM is proposing to amend Indiana's air permitting rules to implement U.S. EPA's requirements for the $PM_{2.5}$ NSR program.

On March 11, 2011, U.S. EPA proposed to defer, for a period of three years, greenhouse permitting requirements for CO_2 emissions from biomass-fired and other biogenic sources. If U.S. EPA finalizes this action and based on the timing of this rulemaking, IDEM may consider including updates to the permitting rules to address this federal action.

Applicability of NSR to $PM_{2.5}$ Precursors

Under the $PM_{2.5}$ NSR Implementation Rule, U.S. EPA presumes that both SO_2 and NO_x are $PM_{2.5}$

precursors. Regulating both SO_2 and NO_x as $PM_{2.5}$ precursors is unlikely to be a major burden to sources. Currently, SO_2 is regulated as part of the NSR program for the SO_2 NAAQS and NO_x is regulated as an NSR pollutant as a precursor for the ozone NAAQS and as an indicator for the NO_2 NAAQS. U.S. EPA does not presume VOC or ammonia to be a precursor to $PM_{2.5}$ for the NSR program.

IDEM is proposing to regulate SO_2 and NO_x as precursors for $PM_{2.5}$ under Indiana's NSR program. IDEM agrees with U.S. EPA and proposes to not include VOC and ammonia emissions as precursors for $PM_{2.5}$ under the NSR program.

Significant Emissions Rate (SER) for Direct Emissions of $PM_{2.5}$ and $PM_{2.5}$ Precursors

The determination of what should be classified as a modification subject to major NSR is based, in part, on a SER. The SER is a rate above which a net emission increase will trigger major NSR permitting requirements if the increase in emissions results from a major modification. If an emission increase resulting from a major modification is below this rate, sources are exempt from major NSR requirements. U.S. EPA's $PM_{2.5}$ NSR Implementation Rule sets the SER for direct emissions of $PM_{2.5}$ at 10 tons per year (tpy) and the SER for $PM_{2.5}$ precursors SO_2 and NO_x at 40 tpy each.

IDEM is proposing to amend Indiana's air permitting rules at 326 IAC 2 to be consistent with U.S. EPA's $PM_{2.5}$ NSR Implementation Rule's SER for direct $PM_{2.5}$ and $PM_{2.5}$ precursors.

Condensable PM Emissions

Condensable PM emissions commonly make up a significant component of direct $PM_{2.5}$ emissions. Condensable PM emissions exist almost entirely in the 2.5 micrometer range and smaller; these emissions are inherently more significant for $PM_{2.5}$ than for prior PM standards addressing larger particles. U.S. EPA requires that all NSR applicability determinations for $PM_{2.5}$ and PM_{10} address condensable emissions, as applicable.

IDEM is proposing to amend 326 IAC 2 to be consistent with U.S. EPA regulations concerning condensable PM emissions. Amendments may include amending the definition of "regulated NSR pollutant" in 326 IAC 2 to ensure that $PM_{2.5}$ and PM_{10} applicability determinations address condensable emissions in accordance with federal rules.

Offset Ratios for Direct $PM_{2.5}$ and $PM_{2.5}$ Precursors

Under Section 173 of the CAA, all major sources and major modifications at existing major sources within a nonattainment area must obtain emission reductions to offset any emission increases resulting from the project in an amount that is at least equal to the emission increase, and that is consistent with reasonable further progress towards attainment. U.S. EPA refers to the proportional difference between the amount of the required offsets to the amount of emission increase as the "offset ratio". $PM_{2.5}$ precursors (SO_2 and NO_x) are also subject to the offset requirements.

In this rulemaking, IDEM is proposing to amend 326 IAC 2 to be consistent with the federal $PM_{2.5}$ NSR Implementation Rule's offset ratios for $PM_{2.5}$ and $PM_{2.5}$ precursors. IDEM is waiting for additional guidance from U.S. EPA regarding offset ratios for $PM_{2.5}$ and $PM_{2.5}$ precursors before proposing draft rule language.

$PM_{2.5}$ Increments

The $PM_{2.5}$ PSD Increments, SILs, and SMC Rule sets increments for $PM_{2.5}$. Increments are designed to allow a uniform amount of pollutant concentration increase for each area in the United States having a particular classification (i.e. Class I, II, or III). An increment is the maximum allowable increase in ambient concentrations of a pollutant in an area. Increases above the increment level are considered to significantly deteriorate air quality.

IDEM is proposing to amend 326 IAC 2 to include the $PM_{2.5}$ increments included in U.S. EPA's $PM_{2.5}$ PSD Increments, SILs, and SMC Rule.

$PM_{2.5}$ SILs

SILs are a screening tool used to determine whether emissions from a proposed major new stationary source or modification will have a "significant" impact on air quality in the area. If an individual source projects an increase in air quality impacts less than the corresponding SIL, its impact is said to be de minimis and the permit applicant would not be required to perform a more comprehensive, cumulative modeling analysis. A cumulative analysis involves measuring the impact of the new source in addition to impacts from other existing sources in the area. If a cumulative modeling analysis indicates a violation of the NAAQS, the SILs may also be used to determine whether the proposed source's impact on a modeled violation is significant enough that it is considered to "cause or contribute to" the modeled violation of the NAAQS or increment. The $PM_{2.5}$ PSD Increments, SILs, and SMC Rule established SILs for $PM_{2.5}$ by scaling the existing SILs for PM_{10} by the ratio of the $PM_{2.5}$ NAAQS to the PM_{10} NAAQS for each applicable averaging period (annual and 24-hour).

U.S. EPA does not require Indiana to adopt SILs in order to have an approvable NSR or PSD program. However, U.S. EPA believes that the availability of SILs as a screening tool greatly improves PSD program implementation by streamlining the permit process and reducing labor hours necessary to submit and review a complete permit application where the project impact of the proposed source is de minimis in the relevant area.

IDEM is proposing to amend Indiana's air permitting rules at 326 IAC 2 to include the $PM_{2.5}$ SILs promulgated by U.S. EPA in the $PM_{2.5}$ PSD Increments, SILs, and SMC Rule.

IDEM is seeking comments on proposed changes to the air permitting review rules at 326 IAC 2 and any other rules that may be affected in Title 326 by this proposed rulemaking. These amendments will make Indiana's

air permitting rules consistent with the federal regulations for the $PM_{2.5}$ NSR air permitting program. Other amendments considered for this rulemaking would defer greenhouse gas permitting requirements for CO_2 emissions from biomass-fired and other biogenic sources. Upon completion, this rule will be submitted to U.S. EPA for approval into the state implementation plan.

Alternatives to Be Considered Within the Rulemaking

Alternative 1. Update Indiana's air permitting rules at 326 IAC 2 to include new federal requirements for $PM_{2.5}$ NSR promulgated by U.S. EPA and other changes necessary to make 326 IAC 2 consistent with federal regulations. Amendments may include updating 326 IAC 2 to include the federal regulations for the NSR program promulgated by U.S. EPA in the 2008 $PM_{2.5}$ NSR Implementation Rule and the 2010 $PM_{2.5}$ PSD Increments, SILs, and SMC Rule and amending definitions of air permitting terms in 326 IAC 2 to be consistent with federal air permitting rules.

- Is this alternative an incorporation of federal standards, either by reference or full text incorporation? Yes.
- Is this alternative imposed by federal law or is there a comparable federal law? Yes.
- If it is a federal requirement, is it different from federal law? No.
- If it is different, describe the differences. Not applicable.

Alternative 2. No rulemaking.

- Is this alternative an incorporation of federal standards, either by reference or full text incorporation? No.
- Is this alternative imposed by federal law or is there a comparable federal law? No.
- If it is a federal requirement, is it different from federal law? Not applicable.
- If it is different, describe the differences. Not applicable.

Applicable Federal Law

40 CFR 50 (National Primary and Secondary Ambient Air Quality Standards) and 40 CFR 51 (Requirements for Preparation, Adoption, and Submittal of Implementation Plans) are applicable federal laws impacting this rulemaking. 40 CFR 50 contains the standards for criteria pollutants; $PM_{2.5}$ is a criteria pollutant. 40 CFR 51 stipulates what states must include in their NSR programs in order to get U.S. EPA approval of their NSR rules.

Potential Fiscal Impact

Potential Fiscal Impact of Alternative 1. This alternative is an incorporation of federal regulations. The CAA requires states to develop a general plan to attain and maintain the NAAQS. This requirement is triggered anytime that a NAAQS is revised. U.S. EPA revised the $PM_{2.5}$ NAAQS in 2006. Indiana is required to update the state's air permitting rules to include U.S. EPA's new regulations for $PM_{2.5}$ NSR. Significant sources of $PM_{2.5}$ emissions may potentially be impacted by this rulemaking. Major sources of air pollution may become subject to more stringent emission control requirements for $PM_{2.5}$ emissions. Minor sources of air pollution will also need to evaluate their emissions of $PM_{2.5}$ in areas where new large sources of $PM_{2.5}$ are constructed in the future. However, the proposed rules are not expected to significantly impact the number of facilities requiring permits or the complexity of those permit reviews. Therefore, the department concludes that there should be no significant fiscal impact as a result of promulgating these rules.

Potential Fiscal Impact of Alternative 2. No fiscal impact.

Small Business Assistance Information

IDEM established a compliance and technical assistance (CTAP) program under IC 13-28-3. The program provides assistance to small businesses and information regarding compliance with environmental regulations. In accordance with IC 13-28-3 and IC 13-28-5, there is a small business assistance program ombudsman to provide a point of contact for small businesses affected by environmental regulations. Information on the CTAP program, the monthly CTAP newsletter, and other resources available can be found at:

http://www.in.gov/idem/4108.htm

For purposes of IC 4-22-2-28.1, the Small Business Regulatory Coordinator for this rule is:

Alison Beumer
IDEM Compliance and Technical Assistance Program - OPPTA
MC 60-04 IGCS W041
100 North Senate Avenue
Indianapolis, IN 46204-2251
(317) 232-8172 or (800) 988-7901
ctap@idem.in.gov

For purposes of IC 4-22-2-28.1, the Small Business Ombudsman designated by IC 5-28-17-5 is:

Ryan Asberry
Indiana Economic Development Corporation
One North Capitol, Suite 700
Indianapolis, IN 46204
(317) 232-8962
smallbizombudsman@iedc.in.gov

Resources available to regulated entities through the small business ombudsman include the ombudsman's duties stated in IC 5-28-17-5, specifically IC 5-28-17-5(9), investigating and attempting to resolve any matter

regarding compliance by a small business with a law, rule, or policy administered by a state agency, either as a party to a proceeding or as a mediator.

The Small Business Assistance Program Ombudsman is:

Brad Baughn
IDEM Small Business Assistance Program Ombudsman
MC 50-01 IGCN 1307
100 North Senate Avenue
Indianapolis, IN 46204-2251
(317) 234-3386
bbaughn@idem.in.gov

Public Participation and Workgroup Information

At this time, no workgroup is planned for the rulemaking. If you feel that a workgroup or other informal discussion on the rule is appropriate, please contact Amy Smith, Rule and State Implementation Plan Development Section, Office of Air Quality at (317) 233-8628 or (800) 451-6027 (in Indiana).

STATUTORY AND REGULATORY REQUIREMENTS

IC 13-14-8-4 requires the board to consider the following factors in promulgating rules:

(1) All existing physical conditions and the character of the area affected.

(2) Past, present, and probable future uses of the area, including the character of the uses of surrounding areas.

(3) Zoning classifications.

(4) The nature of the existing air quality or existing water quality, as the case may be.

(5) Technical feasibility, including the quality conditions that could reasonably be achieved through coordinated control of all factors affecting the quality.

(6) Economic reasonableness of measuring or reducing any particular type of pollution.

(7) The right of all persons to an environment sufficiently uncontaminated as not to be injurious to human, plant, animal, or aquatic life or to the reasonable enjoyment of life and property.

REQUEST FOR PUBLIC COMMENTS

At this time, IDEM solicits the following:

(1) The submission of alternative ways to achieve the purpose of the rule.

(2) The submission of suggestions for the development of draft rule language.

Mailed comments should be addressed to:

#11-251 (APCB) $PM_{2.5}$ NSR Amendments
Amy Smith Mail Code 61-50
Rule and State Implementation Plan Development Section
Office of Air Quality
Indiana Department of Environmental Management
100 North Senate Avenue
Indianapolis, Indiana 46204

Hand delivered comments will be accepted by the IDEM receptionist on duty at the tenth floor reception desk, Office of Air Quality, 100 North Senate Avenue, Indianapolis, Indiana.

Comments may be submitted by facsimile at the IDEM fax number: (317) 233-5967, Monday through Friday, between 8:15 a.m. and 4:45 p.m. Please confirm the timely receipt of faxed comments by calling the Rule and State Implementation Plan Development Section at (317) 234-6530.

COMMENT PERIOD DEADLINE

Comments must be postmarked, faxed, or hand delivered by June 3, 2011.

Additional information regarding this action may be obtained from Amy Smith, Rule and State Implementation Plan Development Section, Office of Air Quality, (317) 233-8628 or (800) 451-6027 (in Indiana).

Scott Deloney, Chief
Air Programs Branch
Office of Air Quality

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